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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/872,523	06/01/2001	H. Robert Horvitz	01997/536002	3312

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CLARK & ELBING LLP  
101 FEDERAL STREET  
BOSTON, MA 02110

EXAMINER
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YU, MISOOK

ART UNIT	PAPER NUMBER
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1642

DATE MAILED: 06/03/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/872,523

Applicant(s)

HORVITZ ET AL.

Examiner

MISOOK YU, Ph.D.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 June 2001.
- 2a) ☐ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-60 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-60 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Election/Restrictions***

Restriction to one of the following inventions is required under 35 U.S.C. 121:

1. Claims 1-6, 29 in part, drawn to DNA encoding SEQ ID NO:1 protein, SEQ ID NO:2 DNA, vector, classified in class 536, subclass 23.1.
2. Claims 7, 8 in part, 29 in part, drawn to SEQ ID NO:16, classified in class 536, subclass 23.1.
3. Claims 7, 8 in part, 29 in part, drawn to SEQ ID NO:18, classified in class 536, subclass 23.1.
4. Claims 7, 8 in part, 29 in part, drawn to SEQ ID NO:24, classified in class 536, subclass 23.1.
5. Claims 7, 8 in part, 29 in part, drawn to SEQ ID NO:26, classified in class 536, subclass 23.1.
6. Claims 7, 8 in part, 29 in part, drawn to SEQ ID NO:28, classified in class 536, subclass 23.1.
7. Claims 7, 8 in part, 29 in part, drawn to SEQ ID NO:30, classified in class 536, subclass 23.1.
8. Claims 7, 8 in part, 29 in part, drawn to SEQ ID NO:32, classified in class 536, subclass 23.1.
9. Claims 7, 8 in part, 29 in part, drawn to SEQ ID NO:34, classified in class 536, subclass 23.1.
10. Claims 7, 8 in part, 29 in part, drawn to SEQ ID NO:38, classified in class 536, subclass 23.1.
11. Claims 7, 8 in part, 29 in part, drawn to SEQ ID NO:40, classified in class 536, subclass 23.1.
12. Claims 7, 8 in part, 29 in part, drawn to SEQ ID NO:42, classified in class 536, subclass 23.1.
13. Claims 7, 8 in part, 29 in part, drawn to SEQ ID NO:44, classified in class 536, subclass 23.1.

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14. Claims 7, 8 in part, 29 in part, drawn to SEQ ID NO:46, classified in class 536, subclass 23.1.
15. Claim 9, drawn to SEQ ID NO:20, 29 in part, classified in class 536, subclass 23.1.
16. Claim 10, 29 in part, drawn to SEQ ID NO:22, classified in class 536, subclass 23.1.
17. Claim 11 in part, drawn to SEQ ID NO:17, classified in class 530, subclass 350.
18. Claim 11 in part, drawn to SEQ ID NO:19, classified in class 530, subclass 350.
19. Claim 11 in part, drawn to SEQ ID NO:25, classified in class 530, subclass 350.
20. Claim 11 in part, drawn to SEQ ID NO:27, classified in class 530, subclass 350.
21. Claim 11 in part, drawn to SEQ ID NO:29, classified in class 530, subclass 350.
22. Claim 11 in part, drawn to SEQ ID NO:31, classified in class 530, subclass 350.
23. Claim 11 in part, drawn to SEQ ID NO:33, classified in class 530, subclass 350.
24. Claim 11 in part, drawn to SEQ ID NO:35, classified in class 530, subclass 350.
25. Claim 11 in part, drawn to SEQ ID NO:37, classified in class 530, subclass 350.
26. Claim 11 in part, drawn to SEQ ID NO:39, classified in class 530, subclass 350.
27. Claim 11 in part, drawn to SEQ ID NO:41, classified in class 530, subclass 350.
28. Claim 11 in part, drawn to SEQ ID NO:43, classified in class 530, subclass 350.

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29. Claim 11 in part, drawn to SEQ ID NO:45, classified in class 530, subclass 350.
30. Claim 11 in part, drawn to SEQ ID NO:47, classified in class 530, subclass 350.
31. Claims 12-17, drawn to DNA encoding LIN-56 polypeptide, SEQ ID NO:4, classified in class 536, subclass 23.1.
32. Claims 18, 19, drawn to DNA encoding a mutant lin-56, SEQ ID NO:48 DNA classified in class 536, subclass 23.1.
33. Claims 20, 21, 24, and 25, 29 in part, drawn to DNA encoding SEQ ID NO:5, SEQ ID NO:6 DNA, classified in class 536, subclass 23.1.
34. Claims 22, 23, 26, and 27 in part, 29 in part, drawn to DNA encoding mutant LIN-61 protein, SEQ ID NO:73, classified in class 536, subclass 23.1.
35. Claims 22, 23, 26, and 27 in part, 29 in part, drawn to DNA encoding mutant LIN-61 protein, SEQ ID NO:74, classified in class 536, subclass 23.1.
36. Claims 22, 23, 26, and 27 in part, 29 in part, drawn to DNA encoding mutant LIN-61 protein, SEQ ID NO:75, classified in class 536, subclass 23.1.
37. Claims 22, 23, 26, and 27 in part, 29 in part, drawn to DNA encoding mutant LIN-61 protein, SEQ ID NO:78, classified in class 536, subclass 23.1.
38. Claim 28, drawn to SEQ ID NO:70 protein, classified in class 530, subclass 350.
39. Claim 28, drawn to SEQ ID NO:71 protein, classified in class 530, subclass 350.
40. Claim 28, drawn to SEQ ID NO:72 protein, classified in class 530, subclass 350.
41. Claims 30 and 31 in part, drawn to a lin-8 encoding DNA integrated transgenic cell, classified in class 435, subclass 325.

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42. Claims 30 and 31 in part, drawn to a lin-56 encoding DNA integrated transgenic cell, classified in class 435, subclass 325.
43. Claims 30 and 31 in part, drawn to a lin-61 encoding DNA integrated transgenic cell, classified in class 435, subclass 325.
44. Claim 32, drawn to antibody to LIN-8, classified in class 530, subclass 387.1.
45. Claim 33, drawn to antibody to LIN-56, classified in class 530, subclass 387.1.
46. Claim 34, drawn to antibody to LIN-61, classified in class 530, subclass 387.1.
47. Claims 35-37 in part, drawn to method of modulating cell proliferation using DNA encoding SEQ ID NO:1, classified in class 435, subclass 455.
48. Claims 35-37, drawn to method of modulating cell proliferation using DNA encoding SEQ ID NO:3, classified in class 435, subclass 455.
49. Claims 35-37, drawn to method of modulating cell proliferation using DNA encoding SEQ ID NO:5, classified in class 435, subclass 455.
50. Claims 38, and 39, drawn to method of modulating cell proliferation using SEQ ID NO:1 protein, classified in class 435, subclass 375.
51. Claims 38, and 39, drawn to method of modulating cell proliferation using SEQ ID NO:3 protein, classified in class 435, subclass 375.
52. Claims 38, and 39, drawn to method of modulating cell proliferation using SEQ ID NO:5 protein, classified in class 435, subclass 375.
53. Claims 40-45, 59, and 60, drawn to method of finding a useful compound using lin-8 DNA, classified in class 435, subclass 4.
54. Claims 40-45, 59, and 60, drawn to method of finding a useful compound using lin-56 DNA, classified in class 435, subclass 4.
55. Claims 40-45, 59, and 60, drawn to method of finding a useful compound using lin-61 DNA, classified in class 435, subclass 4.
56. Claims 46-47, drawn to method of finding a useful compound using lin-8 protein, classified in class 435, subclass 7.1.

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57. Claims 46-47, drawn to method of finding a useful compound using lin-56 protein, classified in class 435, subclass 7.1.
58. Claims 46-47, drawn to method of finding a useful compound using lin-61 protein, classified in class 435, subclass 7.1.
59. Claims 48-52, drawn to method of diagnosis by detecting presence of a lin mutant nucleic acid, classified in class 435, subclass 6.
60. Claims 53-58, drawn to method of diagnosis by detecting presence of altered expression of lin nucleic acid, class 435, subclass 6.

The inventions are distinct, each from the other because of the following reasons:

Inventions 1 and 47, 53, 60 are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case the product as claimed can be used in a materially different processes of group 47, 53, or 60.

Inventions 2-16, 31-37 and 59 are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case the process for using the product as claimed can be practiced with another materially different product of 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 31, 32, 33, 34, 35, 36, or 37.

Inventions 17-30, 38-40, 41-43 are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions 17-30, and 38-40 are different proteins with different molecular structures as evidenced by the different SEQ ID NOs. The different inventions 41-43 are different recombinant cells integrated with different DNA encoding different proteins.

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Inventions 44-46 and 56-58 are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case the product as claimed can be used in a materially different process such as purifying proteins capable of binding the antibodies.

Inventions 48, 49, 51, 52, 54, and 55 are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions uses different active ingredients and/or uses different active steps for different objectives to be accomplished.

These inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification. The search required for each of the above inventions is not coextensive with regard to the literature and the sequence searches. Further, a reference which would anticipate the invention of any one group would not necessarily anticipate or make obvious the any of the other groups. For these reasons, restriction for examination purposes is proper.

Group 59 contains claims generic to a plurality of disclosed patentably distinct species listed in claim 49. If group 59 is elected, applicant is required under 35 U.S.C. 121 to elect each of a single disclosed species, even though this requirement is traversed. Claims 50 and 51 will be examined as they read on the elected species.

Group 60 contains claims generic to a plurality of disclosed patentably distinct species: lin-8, lin-56, and lin-61. If group 60 is elected, applicant is required under 35 U.S.C. 121 to elect each of a single disclosed species, even though this requirement is traversed.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable.



Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MISOOK YU, Ph.D. whose telephone number is 703-308-2454. The examiner can normally be reached on 8 A.M. to 5:30 P.M., every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony C Caputa can be reached on 703-308-3995. The fax phone


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numbers for the organization where this application or proceeding is assigned are 703-305-3014 for regular communications and 703-872-9307 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0196.

  
ANTHONY C. CAPUTA  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1600

Misook Yu

May 31, 2003